



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/643,490

08/19/2003

Necdet Uzun

CIS0189US

5439

33031 7590 02/04/2008
CAMPBELL STEPHENSON LLP
11401 CENTURY OAKS TERRACE
BLDG. H, SUITE 250
AUSTIN, TX 78758

EXAMINER

BATES, KEVIN T

ART UNIT

PAPER NUMBER

2153

MAIL DATE

DELIVERY MODE

02/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/643,490

Applicant(s)

UZUN ET AL.

Examiner

Kevin Bates

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

This Office Action is in response to a communication made on December 12, 2007.

Claims 1-66 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knightly (2003/0163593) in view of Sultan (7102997).

Regarding claims 1, 46, and 54, Knightly teaches a method comprising:
receiving information indicating a need to change an amount of data being transmitted through a first media access control (MAC) device to a client of the first MAC device;
forming a message including an indication to a second MAC device to change a rate at which the second MAC device transmits data (Paragraph 47), wherein said forming the message uses the information indicating the need to change the amount of data being transmitted to the client (Paragraph 73, where the change based on the fairness message alters the bandwidth reserved for the clients); and transmitting the message to the second MAC device over a network (Paragraph 47, where each node in the ring

receives a fairness control messages, using that message plus local measurements to throttle rates, and send control messages upstream to inform other nodes how to throttle their rates).

Knightly does not explicitly indicate wherein the information is received when the client determines that the client is receiving data at a rate exceeding a set threshold.

Sultan teaches a resilient packet ring system that allows a client to monitor an aggregate rate it is receiving at (Column 4, lines 38 – 40, where the users of the CUG control and monitor the leaky bucket mechanism) and if that rate exceeds a threshold creating a throttle message in the ring (Column 5, lines 1 – 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Sultan's teaching of setting thresholds and throttle messages based on a per client control in order to ensure certain service level agreements and best effort rates in the network in Knightly are being properly supplied.

Regarding claims 18 and 35, Knightly teaches an apparatus comprising: a first media access control (MAC) device operable to be coupled to a network, the first MAC device including control logic configured to prepare a message for transmission on the network including an indication to change a rate at which another MAC device transmits data (Paragraph 47, where each node in the ring receives a fairness control messages, using that message plus local measurements to throttle rates, and send control messages upstream to inform other nodes how to throttle their rates); and a MAC client coupled to the first MAC device, including: a buffer for storing data transmitted to the MAC client; and buffer control circuitry configured to provide information about an

amount of data stored in the buffer (Paragraph 48), wherein the control logic is responsive to the information about the amount of data stored in the buffer to prepare the message (Paragraph 61, where determining congestion of a node comprises determining if the secondary transit queue, the buffer for lower class traffic, is above a threshold).

Knightly does not explicitly indicate that the MAC client comprises a dedicated buffer for transmitting data to the MAC client.

Sultan teaches a system where there is included buffers on a per client basis that are monitored and used for sending throttle messages (Column 3, lines 19 – 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Sultan's teaching of setting thresholds and throttle messages based on a per client control in order to ensure certain service level agreements and best effort rates in the network in Knightly are being properly supplied.

Regarding claims 2 and 19, Knightly teaches the method of claims 1 and 18 wherein the network is a metropolitan area network (MAN) (Paragraph 5, lines 1-2).

Regarding claims 3 and 20, Knightly teaches the method of claims 1 and 18 wherein the network is a resilient packet ring (RPR) network (Paragraph 7).

Regarding claims 36, 47 and 55, Knightly teaches the apparatus of claim 35 wherein the network is at least one of a metropolitan area network (MAN) and a resilient packet ring (RPR) network (Paragraph 7).

Regarding claims 4, 21, and 37, Knightly teaches the method of claims 1, 18 and 35 wherein the network includes a first datapath for transmitting data from the first

MAC device to the second MAC device, and wherein the network includes a second datapath for transmitting data from the second MAC device to the first MAC device (Figure 1 and 2, where the network is a ring and each nodes are connected through different datapaths).

Regarding claim 5, 25, 38, 48, and 56, Knightly teaches the method of claims 1, 18, 35, 46, and 54 wherein the message is a resilient packet ring (RPR) fairness message (Paragraph 10).

Regarding claims 6, 26, 39, 49, and 57, Knightly teaches the method of claims 1, 18, 35, 46, and 54 further comprising: determining an extent to which a data buffer associated with the client of the first MAC device contains data (Paragraph 48); and preparing the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device based on the extent to which the data buffer associated with the client of the first MAC device contains data (Paragraph 113).

Regarding claim 7 and 58, Knightly teaches the method of claims 6 and 54 further comprising: transmitting, to the first MAC device, the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device (Paragraph 47).

Regarding claim 8, 27, 40, 50 and 59, Knightly teaches the method of claims 1, 18, 35, 46, and 54, wherein the message further includes a MAC device address (Paragraph 163, where each node receives a feedback signal, updates it and sends it

upstream. A control message is inherently addressed to the MAC of the address it is being sent too).

Regarding claim 9, 28 and 60, Knightly teaches the method of claims 8, 27, and 59 wherein the MAC device address corresponds to one of the first MAC device, the second MAC device, and another MAC device (Paragraph 163, where each node receives a feedback signal, updates it and sends it upstream. A control message is inherently addressed to the MAC of the address it is being sent too).

Regarding claims 10, 29, 41, 51, and 61, Knightly teaches the method of claims 1, 18, 35, 46, and 54 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes at least one of: a MAC device address, a data transmission rate, a ramp factor, and a flag (Paragraph 160 and 163, where F is a transmission rate and it is sent to a second device).

Regarding claims 11, 30, 42, and 62, Knightly teaches the method of claims 1, 18, 35, and 54 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes a data transmission rate, the method further comprising: determining the data transmission rate (Paragraph 160 and 163).

Regarding claim 12 and 63, Knightly teaches the method of claims 11 and 54 wherein the determining the data transmission rate further comprises at least one of: calculating the data transmission rate; selecting a value for the data transmission rate; and determining a ramp factor (Paragraph 166).

Regarding claims 13 and 64, Knightly teaches the method of claims 1 and 54 further comprising: transmitting the message from the second MAC device to a third MAC device (Paragraph 166, where each packet in the ring receives the fairness message, updates the values and forwards it upstream).

Regarding claim 14, Knightly teaches the method of claim 1 wherein the first MAC device is part of a first resilient packet ring (RPR) station and wherein the second MAC device is part of a second RPR station (Paragraph 7).

Regarding claims 15, 31, 43, 52 and 65, Knightly teaches the method of claims 1, 18, 35, 46, and 54 wherein the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device includes at least one of: a data transmission rate, a counter value, a message indicating that a buffer threshold has been exceeded, and a signal from the client of the first MAC (Paragraph 160 and 166).

Regarding claim 16, 34, 45, 53, and 66, Knightly teaches the method of claim 1 wherein: the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device further comprises at least one of: information indicating the need to reduce the amount of data being transmitted, and information indicating the need to increase the amount of data being transmitted; and the indication to the second MAC device to change the rate at which the second MAC device transmits data further comprises at least one of: an indication to the second MAC device to reduce the rate at which the second MAC

device transmits data, and an indication to the second MAC device to increase the rate at which the second MAC device transmits data (Paragraph 67).

Regarding claim 17, Knightly teaches the method of claim 1 encoded in a computer readable medium as instructions executable on a processor, the computer readable medium being one of an electronic storage medium, a magnetic storage medium, and an optical storage medium (Paragraph 46, where the processor carries out the algorithm).

Regarding claim 22, Knightly teaches the apparatus of claim 21 wherein the first MAC device is further operable to transmit the message to the second MAC device (Figure 1 and 2, where the network is a ring and each nodes are connected through different datapaths).

Regarding claim 23, Knightly teaches the apparatus of claim 21 wherein the second MAC device is configured to transmit the message to a third MAC device (Figure 1 and 2, where the network is a ring and each nodes are connected through different datapaths).

Regarding claim 24, Knightly teaches the apparatus of claim 21 wherein the first MAC device is part of a first resilient packet ring (RPR) station and wherein the second MAC device is part of a second RPR station (Figure 1 and 2, where the network is a ring and each nodes are connected through different datapaths).

Regarding claim 32, Knightly teaches the apparatus of claim 18 wherein MAC client further comprises packet processing circuitry coupled to the buffer (Paragraph 46).

Regarding claims 33 and 44, Knightly teaches the apparatus of claims 32 and 35 wherein the packet processing circuitry includes the buffer control circuitry (Paragraph 46).

Response to Arguments

Applicant's arguments filed December 12, 2007 have been fully considered but they are not persuasive.

The applicant argues that the reference does not teach determining when the client is receiving data at a rate exceeding a set threshold because Sultan teaches monitoring clients in groups and not individually. The examiner disagrees, while Sultan does teach monitoring buffers and packet flow for a CUG, Sultan also teaches that a CUG can be disclosed as only one client (Figure 1, element 18-2A; Column 2, line 66 – Column 3, line 2). In the embodiment disclosed in Sultan where the CUG is one MAC client, then it meets the limitations of the claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Application/Control Number:
10/643,490
Art Unit: 2153

Page 10

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

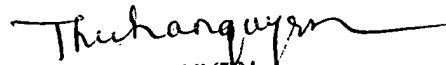
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OK T BT

Kevin Bates
January 30, 2008


THU HA NGUYEN
PRIMARY EXAMINER